

**REMARKS**

Applicant concurrently files herewith an Excess Claim Fee Payment Letter and corresponding fee for seven (7) excess total claims.

Claims 1-3, 5-6, and 9-30 are all of the claims presently pending in the application. Claims 1-3 and 5 have been amended to more particularly define the invention. Claims 4 and 7-8 have been canceled. Claims 21-30 have been added to claim additional features of the invention.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1, 2, 3, 5, 6, 9, 10, 12, 13, 15, 18, and 19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Wu et al. (U.S. Patent No. 6,332,007). Claims 4, 7, and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wu in view of Balogh (U.S. Publication No. 0024953 A1).

These rejections are respectfully traversed in the following discussion.

**I. THE CLAIMED INVENTION**

The claimed invention (e.g., as defined in claim 1) is directed to a high speed roaming method of a wireless LAN including a network, a plurality of access points provided in the network, and a mobile terminal that is radio-connected to one of the plurality of access points via a communication system using a frequency hopping. Each of the access points registers a predetermined number of access points out of respective neighboring access points, sends out hopping information of its own access point periodically to the network at different timings, receives hopping information of the neighboring access points, and synchronizes all access points in a same subnet of the network and sends out radio beacons synchronously from the access points. The mobile

terminal monitors the radio beacons of a connected access point and downloads hopping information of the neighboring access points from the connected access point, monitors the radio beacons of the neighboring access points based on the hopping information, constructs the monitored hopping information as a database, and selects and connects the access point having a best radio situation by referring the database of the neighboring access points when a quality of the radio beacon of the connected access point is reduced lower than a predetermined value. When the mobile terminal is not connected to the access point having a best radio situation the mobile terminal is connected subsequently to an access point having a second best radio situation.

Conventional high-speed roaming methods using wireless LANs provide a roaming method that is started after the beacon quality is reduced smaller than a threshold value. The radio situations of the access points are then compared with each other by scanning the access points and then the subscription operation is carried out in synchronism with the access point having the best communication environment (see page 4, lines 11-19). The access point having a highest receive signal strength indicator (RSSI) is selected from the neighboring access points in a short time based on the hopping information that is downloaded when the beacon quality is lowered below the threshold value. Thus the access point can be decided as the roaming destination.

However, before the operation is shifted to the subscription operation, the roaming function is started after the beacon quality is lowered below the threshold value, then the access points that have been registered as the neighboring access points are scanned, then their radio situations are compared mutually, and then the subscription operation is synchronized. This results in increased time before the subscription operation begins (see page 6, lines 1-18).

The claimed invention, on the other hand, provides a high speed roaming method that includes a mobile terminal. When the mobile terminal is not connected to the access point having a best radio situation the mobile terminal is connected subsequently to an access point having a second best radio situation (See page 18, lines 8-14). The high-speed roaming method is capable of executing the roaming in a very short time by applying immediately the subscription operation to the neighboring access point having

the best communication environment at a point of time when the beacon quality of the connected access point is lowered below the threshold value (see Application at page 6, line 23 through page 7, line 3).

## II. THE PRIOR ART REFERENCES

### A. The Wu Reference

Claims 1, 2, 3, 5, 6, 9, 10, 12, 13, 15, 18, and 19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Wu. Applicants, however, respectfully submit that there are elements of the claimed invention which are neither taught nor suggested by Wu.

That is, contrary to the Examiner's allegations, Wu does not teach or suggest a high speed roaming method "*wherein, when said mobile terminal is not connected to said access point having a best radio situation, said mobile terminal is connected subsequently to said access point having a second best radio situation*" as recited in claim 1.

As noted above, unlike conventional roaming methods, the claimed invention provides a high speed roaming method that includes a mobile terminal. When the mobile terminal is not connected to the access point having a best radio situation the mobile terminal is connected subsequently to an access point having a second best radio situation (See page 18, lines 8-14). The high-speed roaming method is capable of executing the roaming in a very short time by applying immediately the subscription operation to the neighboring access point having the best communication environment at a point of time when the beacon quality of the connected access point is lowered below the threshold value (see Application at page 6, line 23 through page 7, line 3).

Clearly, the novel features of the claimed invention are not taught or suggested by Wu. Indeed, the Examiner attempts to rely on Figure 1 and several passages of the disclosure of Wu to support his allegations. However, the Examiner is clearly incorrect.

These passages in Wu merely describe a roaming algorithm for associating a mobile station with an access point in a wireless LAN system used in an automatic guidance vehicle. Specifically, Wu discloses a roaming algorithm where each access point is preconfigured with the adjacent access points. The mobile station receives

information of the neighboring access points from the currently associated access points. The mobile station monitors each of the access points and, during roaming, chooses the best access point to associate with, without having to scan each of the access points.

Nowhere, however, in these passages (nor anywhere else for that matter) does Wu teach or suggest that when the mobile terminal is not connected to the access point having a best radio situation the mobile terminal is connected subsequently to an access point having a second best radio situation. In fact, the Examiner does not even allege that Wu teaches or suggests this limitation of the claimed invention.

Therefore, Applicants submit that there are elements of the claimed invention that are not taught or suggested by Fang. Therefore, the Examiner is respectfully requested to withdraw this rejection.

#### **B. The Balogh Reference**

Claims 4, 7, and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wu in view of Balogh. Applicants disagree, however, and respectfully traverse this rejection.

That is, contrary to the Examiner's allegations, Balogh does not make up for the deficiencies of Wu, and fails to teach or suggest a high speed roaming method "*wherein, when said mobile terminal is not connected to said access point having a best radio situation, said mobile terminal is connected subsequently to said access point having a second best radio situation*" as recited in claim 1.

Indeed, Balogh teaches a terminal selecting a first access point with the best connection attributes and then selecting a second access point. Balogh, however, does not teach that the mobile terminal is connected to an access point having a best radio situation and then being subsequently connected to a second access point having a second best radio situation.

If the Examiner, however, wishes to pursue this rejection Applicants respectfully submit that Balogh can be removed as a prior art reference by filing a verified English translation. That is, the filing date of Balogh is February 20, 2001, which is after the filing date of Applicants' priority document JP 2000-209784, which was filed on July 11,

2000. Accordingly, the Balogh reference can be eliminated as a prior art reference because the priority document provides support under 35 U.S.C. § 112, paragraph 1, for each of the rejected claims. The removal of the Balogh reference avoids the need to present arguments in favor of patentability of the claimed invention over the Balogh reference.

Therefore, Applicants submit that Balogh may be removed as a prior art reference. Therefore, the Examiner is respectfully requested to withdraw this rejection.

### **III. NEW CLAIMS**

New claims 21-30 are added to claim additional features of the present invention and to provide more varied protection for the present invention. These claims are independently patentable because of the novel features recited therein.

Applicants respectfully submit that new claims 21-30 are patentable over any combination of the applied references at least for analogous reasons to those set forth above with respect to claims 1-3, 5-6 and 9-20.

### **V. CONCLUSION**

Applicants have amended the specification and drawings to correct minor typographical errors in the application.

Specifically, Figure 7 has been amended to replace the phrase “the ageing timer end?” with “the aging timer end?” in S77 (and similarly in S79 and S72), as well as the phrase “seve the hopping information, etc.” with the phrase “save the hopping information” in S75. Paragraph [0018] of the specification has been amended as shown above. Such a correction is supported in the specification and drawings as a whole including paragraph [0043] on page 18, lines 7-14 of the originally filed specification. No new matter has been added.

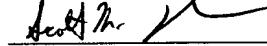
In view of the foregoing, Applicants submit that claims 1-3, 5-6 and 9-30, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: June 23, 2004

  
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# Annotated Sheet Showing Changes



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FIG. 7

